

AD-A087 460

ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2  
19705A MLRS, MISSILE NUMBERS 198, 167, 166, ROUND NUMBERS B-82,--ETC(U)  
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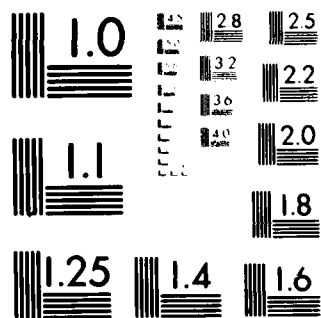
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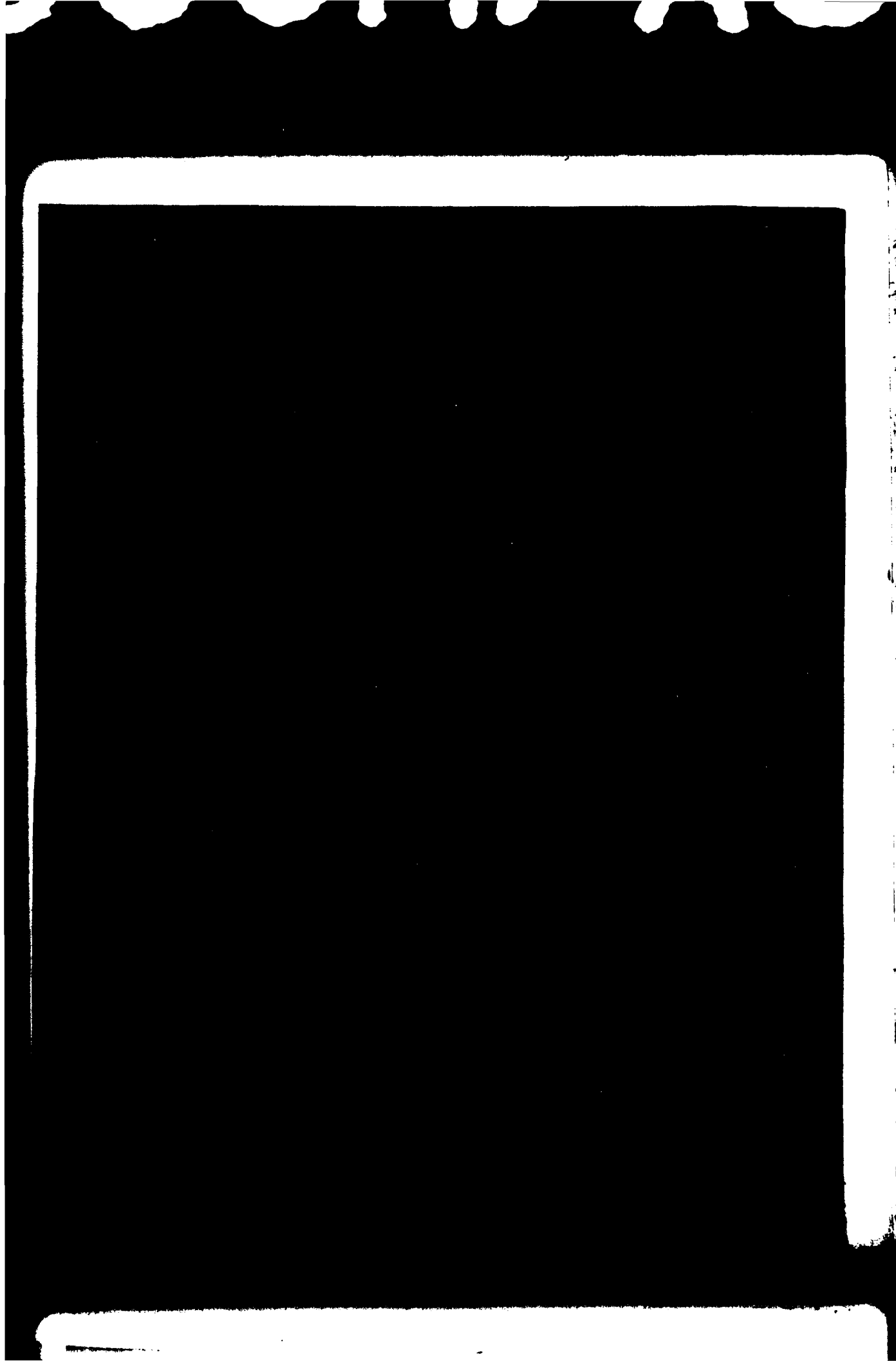
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MICROCOPY RESOLUTION TEST CHART  
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18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 1970SA MLRS, Missile Numbers 198, 167, 166, Round Numbers B-82, B-83, B-84 are presented in tabular form.		

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## INTRODUCTION

19705A MLRS, Missile Numbers 198, 167 and 166, Round Numbers B-82, B-83 and B-84, were launched from Snake White Sands Missile Range (WSMR), New Mexico, at 0802:57, 0803:01 and 0803:05 MST on 11 February 1980. The scheduled launch times were 0800, 0800:04 and 0800:08 MST.

## DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

### 1. Observations

#### a. Surface

(1) Standard surface observations to include pressure, temperature ( $^{\circ}\text{C}$ ), relative humidity, dew point ( $^{\circ}\text{C}$ ), density ( $\text{gm}/\text{m}^3$ ), wind direction and speed, and cloud cover were made at the Snake Met Site at T-0 minutes.

(2) Monitor of wind speed and direction from one anemometer was provided in the launch control room.

#### b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

### SITE AND ALTITUDE

Snake	360 meters
Denver	2 km

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 96,000 feet in 500-foot increments.

### SITE AND TIME

Jallen 0800 MST



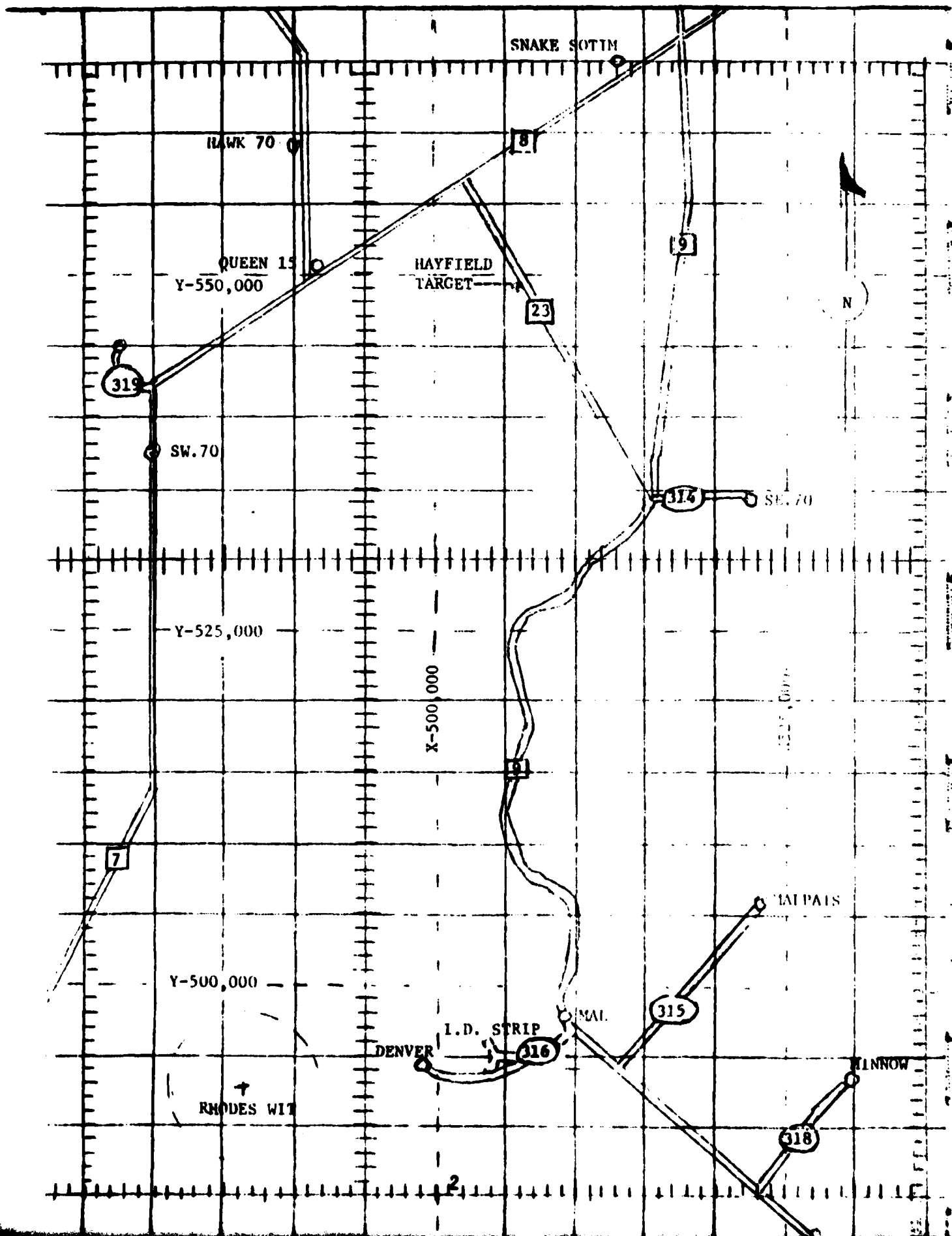


TABLE 1. Surface Observations taken at 0800 MST,  
11 February 1980, at Snake Site, 19705A  
MLRS, Missile Numbers 198, 167 and 166,  
Round Numbers B-82, B-83 and B-84.

ELEVATION	Unknown	FT/MSL
PRESSURE	865.0	MBS
TEMPERATURE	1.0	°C
RELATIVE HUMIDITY	69	%
DEW POINT	-4.1	°C
DENSITY	1095	GM/M <sup>3</sup>
WIND SPEED	05	KTS
WIND DIRECTION	060	DEGREES
CLOUD COVER	0	C1

## PILOT BALLOON MEASURED WIND DATA

**TABLE 2**

RELEASED FROM **Snake** DATE **11 February 1980** TIME **0800 MST**

TRACKER	COORDINATES (WSTM)	X	Unknown	Y	Unknown	H	Unknown
---------	--------------------	---	---------	---	---------	---	---------

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH

HEIGHTS ARE METERS AGL XX OR FEET AGL       .

[illegible][illegible][illegible]

### TABLE 3

RELEASED FROM DENVER

DATE **11 February 1980**

TIME 0800 MST

## TRACKER

COORDINATES (WSTM)

**X = 499,064.03**

$$Y = 493,904.12$$

H= 4123.10

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH

HEIGHTS ARE METERS AGL XX OR FEET AGL .

[illegible][illegible][illegible]

STATION ALTITUDE 4951.00 FEET MSL  
11 FEB. 60  
ASCENSION NO. 39

SIGNIFICANT LEVEL DATA  
04200300.9  
JALLEN

GEODETIC COORDINATES  
33.16712 LAT DEG  
106.49511 LONG DEG

TABLE 4

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
877.5	4051.0	-5.0	76.0
867.0	4364.3	-1.0	72.0
850.0	4888.1	-0.4	63.0
809.0	6185.5	.7	34.0
771.2	7045.8	.0	34.0
742.8	8432.7	.0	19.0
700.0	9983.7	-3.4	22.0
644.2	12125.0	-7.5	19.0
610.0	13517.3	-8.7	19.0
500.0	16489.3	-18.4	20.0
400.0	23825.5	-31.5	22.0
366.8	25821.4	-36.8	24.0
300.0	30306.0	-46.7	
250.0	34208.5	-55.7	
247.6	34410.5	-55.4	
232.0	35781.8	-53.0	
200.0	39919.4	-55.1	
184.4	40634.2	-53.6	
121.2	49366.6	-61.7	
100.0	53290.2	-61.2	
77.6	58444.4	-65.3	
70.0	60524.3	-63.6	
61.2	63265.8	-60.7	
50.8	67050.5	-64.4	
50.0	67382.2	-63.0	
43.0	70449.7	-63.0	
30.0	77844.7	-59.0	
22.2	84036.5	-59.4	
20.0	86831.5	55.9	
14.0	96298.1	-54.9	

GEODETIC COORDINATES  
33.16712 LAT DEG  
106.49511 LONG DEG

UPPER AIR DATA  
0420330039  
JALLEN  
TABLE 5

STATION ALTITUDE 4051.00 FEET MSL  
11 FEB. 60  
0600 HRS MST  
ASCENSION NO. 39

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	CIRCESSION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4051.0	877.5	-5.0	76.0	1130.4	638.4	60.0	1.9	1.000270
4500.0	862.5	-5.7	69.7	1101.5	643.4			1.000266
5000.0	846.3	-7.0	60.4	1072.7	644.0			1.000259
5500.0	830.3	-9.2	49.3	1057.1	644.5			1.000251
6000.0	814.7	-12.1	38.1	1035.8	644.9			1.000243
6500.0	799.4	-13.5	34.0	1016.5	644.8			1.000237
7000.0	784.4	-13.7	34.0	998.4	644.5			1.000233
7500.0	769.6	-14.3	33.2	980.6	644.2			1.000229
8000.0	755.1	-17.4	25.6	962.3	644.1			1.000222
8500.0	740.9	-20.7	19.1	944.9	643.9			1.000216
9000.0	726.8	-21.2	20.1	930.7	642.6	6.6		1.000213
9500.0	713.1	-21.6	21.1	916.8	641.3	14.5		1.000210
10000.0	699.6	-22.0	22.0	903.0	640.0	10.6		1.000207
10500.0	686.1	-23.2	21.3	888.9	638.8	2.8		1.000203
11000.0	672.9	-24.4	20.6	875.0	637.7	350.2		1.000199
11500.0	660.0	-25.6	19.9	861.3	636.5	333.0		1.000196
12000.0	647.3	-26.8	19.2	847.8	635.4	327.1		1.000192
12500.0	634.8	-27.3	19.0	833.2	634.7	319.5		1.000189
13000.0	622.5	-27.7	19.0	818.3	634.2	297.8		1.000186
13500.0	610.4	-28.1	19.0	803.6	633.7	210.2		1.000182
14000.0	598.3	-28.8	19.1	790.7	632.5	240.9		1.000179
14500.0	586.3	-29.6	19.2	778.0	631.3	251.7		1.000176
15000.0	574.9	-30.3	19.3	765.4	630.2	273.8		1.000173
15500.0	563.3	-31.1	19.4	753.1	629.0	283.3		1.000170
16000.0	552.3	-31.9	19.5	741.0	627.8	284.2		1.000167
16500.0	541.4	-32.6	19.6	729.1	626.6	284.8		1.000165
17000.0	530.7	-33.4	19.7	717.3	625.4	278.7		1.000162
17500.0	520.2	-34.2	19.8	705.6	624.2	272.2		1.000159
18000.0	509.9	-35.0	19.9	694.5	623.0	269.9		1.000156
18500.0	499.8	-35.7	20.0	683.4	621.8	269.8		1.000154
19000.0	489.4	-36.7	20.2	672.5	620.3	271.2		1.000151
19500.0	479.3	-37.7	20.4	661.8	618.8	273.6		1.000149
20000.0	469.4	-38.6	20.6	651.3	617.3	274.3		1.000146
20500.0	459.7	-39.6	20.8	640.9	615.8	274.1		1.000144
21000.0	450.2	-40.5	20.9	630.8	614.3	273.7		1.000142
21500.0	440.9	-41.5	21.1	620.8	612.8	273.4		1.000139
22000.0	431.7	-42.5	21.3	611.0	611.2	273.6		1.000137
22500.0	422.8	-43.4	21.5	601.3	609.7	274.5		1.000135
23000.0	414.0	-44.4	21.7	591.9	608.2	275.0		1.000133
23500.0	405.3	-45.4	21.9	582.6	606.6	275.0		1.000130

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 4051.00 FEET MSL  
11 FEB. 60 0800 HRS MST  
ASCENSION NO. 39

UPPER AIR DATA  
0420020039  
JALLEN

GEODETTIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

TABLE 5 (cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (TN) DEGREES	SPEED KNOTS	INDEX OF REFRACTION
24000.0	397.0	-32.0	22.2	5/3.3	605.0	274.8	28.8	1.000128
24500.0	388.5	-33.3	22.7	564.1	603.4	274.1	30.0	1.000126
25000.0	380.1	-34.6	23.2	555.1	601.7	273.5	31.1	1.000124
25500.0	372.0	-35.9	23.7	546.2	600.0	272.4	31.7	1.000122
26000.0	363.9	-37.2	23.0**	537.2	598.4	271.4	32.4	1.000120
26500.0	355.8	-38.5	20.4**	527.8	597.0	269.6	33.4	1.000118
27000.0	347.9	-39.4	17.7**	518.5	595.6	268.0	34.6	1.000116
27500.0	340.2	-40.5	15.0**	509.4	594.2	267.4	37.0	1.000114
28000.0	332.7	-41.6	12.3**	500.5	592.8	267.0	39.5	1.000112
28500.0	325.3	-42.7	9.7**	491.8	591.4	266.2	41.6	1.000110
29000.0	318.1	-43.8	7.0**	483.2	590.0	265.4	43.6	1.000108
29500.0	311.0	-44.9	4.3**	474.8	588.5	264.6	45.8	1.000106
30000.0	304.1	-46.0	1.6**	466.5	587.1	264.0	48.1	1.000104
30500.0	297.3	-47.1		458.3	585.7	262.9	50.2	1.000102
31000.0	290.4	-48.3		450.0	584.2	260.3	52.1	1.000100
31500.0	283.7	-49.5		441.8	582.7	258.0	54.1	1.000098
32000.0	277.2	-50.6		433.9	581.2	256.0	57.0	1.000097
32500.0	270.8	-51.8		426.1	579.7	254.2	60.0	1.000095
33000.0	264.5	-52.9		418.4	578.1	253.8	62.6	1.000093
33500.0	258.4	-54.1		410.9	576.6	253.3	65.0	1.000092
34000.0	252.4	-55.2		403.5	575.1	253.9	67.8	1.000090
34500.0	246.6	-56.2		395.9	573.8	253.7	71.3	1.000088
35000.0	240.8	-57.4		384.4	575.5	253.5	74.6	1.000086
35500.0	235.1	-58.7		373.2	577.1	252.8	76.6	1.000083
36000.0	229.6	-59.1		363.6	577.8	252.1	78.6	1.000081
36500.0	224.3	-59.5		355.6	577.4	251.4	80.0	1.000079
37000.0	219.0	-59.8		347.8	577.0	250.7	81.4	1.000077
37500.0	213.9	-54.1		340.2	576.5	249.4	82.9	1.000076
38000.0	208.9	-54.5		332.8	576.1	247.9	84.5	1.000074
38500.0	204.0	-54.8		325.5	575.6	247.0	85.8	1.000072
39000.0	199.2	-55.0		318.2	575.4	246.9	86.6	1.000071
39500.0	194.6	-54.6		310.1	575.9	246.7	87.4	1.000069
40000.0	190.0	-54.2		302.3	576.5	250.0	89.2	1.000067
40500.0	185.6	-53.7		294.6	577.1	253.2	91.3	1.000066
41000.0	181.2	-53.9		287.9	576.8	256.2	89.3	1.000064
41500.0	176.9	-54.4		281.7	576.2	259.4	84.7	1.000063
42000.0	172.7	-54.9		275.6	575.6	262.0	81.0	1.000061
42500.0	168.6	-55.3		269.6	575.0	262.0	79.5	1.000060
43000.0	164.6	-55.8		263.8	574.4	261.9	78.0	1.000059
43500.0	160.7	-56.3		258.1	573.7	262.0	80.2	1.000057

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL  
11 FEB. 60 0800 HRS MST  
ASCENSION NO. 39

UPPER AIR DATA  
0420030039  
JALLEN

GEODEIC COORDINATES  
33.16712 LAT DEG  
106.49511 LONG DEG

TABLE 5 (cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
							DIRECTION (DEGREES (TN))	SPEED KNOTS	
44000.0	156.9	-56.7			252.5	573.1	262.1	83.5	1.000056
44500.0	153.1	-57.2			247.0	572.5	262.3	85.5	1.000055
45000.0	149.5	-57.6			241.7	571.9	262.6	83.3	1.000054
45500.0	146.0	-58.1			236.4	571.3	262.9	81.1	1.000053
46000.0	142.5	-58.6			231.3	570.7	262.8	79.5	1.000052
46500.0	139.1	-59.0			226.3	570.1	262.6	78.0	1.000050
47000.0	135.8	-59.5			221.4	569.4	264.0	76.1	1.000049
47500.0	132.6	-60.0			216.6	568.8	267.8	73.7	1.000048
48000.0	129.4	-60.4			212.0	568.2	271.5	71.5	1.000047
48500.0	126.4	-60.9			207.4	567.6	272.2	68.8	1.000046
49000.0	123.4	-61.4			202.9	567.0	272.9	66.1	1.000045
49500.0	120.4	-61.7			198.4	566.5	270.9	66.1	1.000044
50000.0	117.5	-61.6			193.5	566.6	268.3	66.8	1.000043
50500.0	114.7	-61.6			188.8	566.7	266.7	67.1	1.000042
51000.0	111.9	-61.5			184.2	566.8	266.5	66.6	1.000041
51500.0	109.2	-61.4			179.7	566.9	266.2	66.1	1.000040
52000.0	106.6	-61.4			175.3	566.9	266.2	63.4	1.000039
52500.0	104.0	-61.3			171.0	567.0	266.3	59.9	1.000038
53000.0	101.5	-61.2			166.8	567.1	266.4	56.3	1.000037
53500.0	99.0	-61.4			162.9	567.0	266.5	51.9	1.000036
54000.0	96.6	-61.8			159.2	566.4	266.7	47.5	1.000035
54500.0	94.3	-62.2			155.6	565.9	266.7	45.2	1.000035
55000.0	92.0	-62.6			152.1	565.4	266.6	44.2	1.000034
55500.0	89.7	-63.0			148.7	564.8	266.9	43.7	1.000033
56000.0	87.5	-63.4			145.4	564.3	269.0	44.4	1.000032
56500.0	85.4	-63.8			142.1	563.7	269.1	45.2	1.000032
57000.0	83.3	-64.1			138.9	563.2	269.9	44.5	1.000031
57500.0	81.3	-64.5			135.8	562.7	270.8	43.6	1.000030
58000.0	79.3	-64.9			132.7	562.1	271.6	42.6	1.000030
58500.0	77.4	-65.3			129.7	561.7	272.0	41.1	1.000029
59000.0	75.5	-64.8			126.3	562.3	272.4	39.5	1.000028
59500.0	73.6	-64.4			122.9	562.8	273.3	38.4	1.000027
60000.0	71.8	-64.0			119.7	563.4	274.9	37.8	1.000027
60500.0	70.1	-63.6			116.5	563.9	276.5	37.3	1.000026
61000.0	68.4	-63.1			113.4	564.6	278.6	35.3	1.000025
61500.0	66.7	-62.6			110.4	565.3	281.4	32.4	1.000025
62000.0	65.1	-62.0			107.5	566.0	284.8	29.6	1.000024
62500.0	63.5	-61.5			104.6	566.8	288.1	27.5	1.000023
63000.0	62.0	-61.0			101.8	567.5	291.6	25.6	1.000023
63500.0	60.5	-60.9			99.3	567.5	295.7	23.9	1.000022



STATION ALTITUDE 4051.00 FEET MSL  
11 FEB. 80  
ASCENSION NO. 39

UPPER AIR DATA  
0420000039  
JALLEN  
TABLE 5 (cont)

GEODETTIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION, DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
6400.0	59.0	-61.4		97.1	566.9	298.2	22.7	1.000022
6350.0	57.6	-61.9		95.0	566.2	300.7	21.6	1.000021
6300.0	56.2	-62.4		92.9	565.6	303.4	20.6	1.000021
6250.0	54.8	-62.9		90.9	564.9	303.5	20.1	1.000020
6200.0	53.5	-63.4		88.9	564.3	303.4	19.7	1.000020
6150.0	52.2	-63.9		85.9	563.6	303.2	19.3	1.000019
6100.0	51.0	-64.3		85.0	563.0	301.0	20.2	1.000019
6050.0	49.7	-63.0		82.4	564.8	298.6	21.2	1.000018
6000.0	48.5	-63.0		80.4	564.8	296.9	22.2	1.000018
5950.0	47.3	-63.0		78.5	564.8	294.1	23.7	1.000017
5900.0	46.2	-63.0		76.5	564.8	291.6	25.3	1.000017
5850.0	45.1	-63.0		74.7	564.8	289.4	26.9	1.000017
5800.0	44.0	-63.0		72.9	564.8	289.4	26.5	1.000016
5750.0	42.9	-63.0		71.1	564.8	290.0	25.5	1.000016
5700.0	41.9	-62.7		69.3	565.2	290.6	24.6	1.000015
5650.0	40.9	-62.4		67.5	565.5	292.2	22.8	1.000015
5600.0	39.9	-62.2		65.8	565.9	296.2	19.8	1.000015
5550.0	38.9	-61.9		64.2	566.2	301.5	16.9	1.000014
5500.0	38.0	-61.6		62.5	566.6	309.0	14.2	1.000014
5450.0	37.1	-61.4		61.0	567.0	307.7	14.5	1.000014
5400.0	36.2	-61.1		59.4	567.3	305.7	15.1	1.000013
5350.0	35.3	-60.8		57.9	567.7	303.6	15.7	1.000013
5300.0	34.5	-60.5		56.5	568.1	302.2	16.5	1.000013
5250.0	33.6	-60.3		55.0	568.4	300.6	17.7	1.000012
5200.0	32.8	-60.0		53.6	568.8	299.6	18.9	1.000012
5150.0	32.0	-59.7		52.3	569.1	298.6	20.0	1.000012
5100.0	31.5	-59.5		51.0	569.5	299.4	19.8	1.000011
5050.0	30.5	-59.2		49.7	569.9	300.2	19.5	1.000011
5000.0	29.8	-59.0		48.4	570.1	301.0	19.3	1.000011
4950.0	29.1	-59.0		47.3	570.0	302.3	18.8	1.000011
4900.0	28.4	-59.1		46.2	570.0	304.0	18.1	1.000010
4850.0	27.7	-59.1		45.1	570.0	305.9	17.5	1.000010
4800.0	27.0	-59.1		44.0	569.9	307.5	16.9	1.000010
4750.0	26.4	-59.2		43.0	569.9	307.1	16.6	1.000010
4700.0	25.8	-59.2		42.0	569.8	306.3	16.3	1.000009
4650.0	25.2	-59.2		41.0	569.8	305.5	16.0	1.000009
4600.0	24.6	-59.3		40.0	569.8	299.6	16.8	1.000009
4550.0	24.0	-59.3		39.0	569.7	296.4	17.5	1.000008
4500.0	23.4	-59.3		38.1	569.7	294.5	18.5	1.000008
4450.0	22.8	-59.4		37.2	569.6			

STATION ALTITUDE 4051.00 FEET MSL  
11 FEB. 63  
ASCENSION NO. 39

UPPER AIR DATA  
0420030039  
JALLEN  
TABLE 5 (cont)

GEODETTIC COORDINATES  
33.16712 LAT DEG  
106.49511 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
84000.0	22.9	-59.4		36.3	569.6	296.6	20.5	1.000008
84500.0	21.9	-42.0		32.9	592.3	298.2	22.6	1.000007
85000.0	21.4	-21.0		29.6	618.6	299.6	24.6	1.000007
85500.0	21.0	-0		26.8	643.8	300.7	26.4	1.000006
86000.0	20.6	21.0		24.5	668.1	300.9	27.1	1.000005
86500.0	20.3	42.0		22.4	691.6	301.2	27.9	1.000005
87000.0	19.9	53.9		21.2	704.6	301.5	28.6	1.000005
87500.0	19.5	48.1		21.2	698.2	301.7	29.3	1.000005
88000.0	19.1	42.2		21.1	691.8	300.7	29.1	1.000005
88500.0	18.8	36.4		21.1	685.4	299.3	28.7	1.000005
89000.0	18.4	30.5		21.1	678.9	297.8	28.3	1.000005
89500.0	18.1	24.7		21.2	672.3	296.3	27.9	1.000005
90000.0	17.7	18.8		21.2	665.7	293.9	28.8	1.000005
90500.0	17.4	13.0		21.2	659.0	289.3	33.8	1.000005
91000.0	17.1	7.1		21.2	652.2	285.9	38.9	1.000005
91500.0	16.8	1.3		21.3	645.3	283.3	44.2	1.000005
92000.0	16.5	-4.6		21.4	638.4	281.3	49.6	1.000005
92500.0	16.2	-10.4		21.4	631.4			1.000005
93000.0	15.9	-16.3		21.5	624.4			1.000005
93500.0	15.6	-22.1		21.6	617.2			1.000005
94000.0	15.3	-28.0		21.7	610.0			1.000005
94500.0	15.0	-33.9		21.8	602.6			1.000005
95000.0	14.7	-39.7		21.9	595.2			1.000005
95500.0	14.4	-45.6		22.1	587.7			1.000005
96000.0	14.2	-51.4		22.2	580.1			1.000005

STATION ALTITUDE 4052.00 FEET MSL  
11 FEB. 60  
ASCENSION NO. 59

MANDATORY LEVELS  
0420030039  
JALLEN  
TABLE 6

GEODETIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	4881.	-4	-6.6	63.	9999.0	9999.0XX	
800.0	6476.	.5	-13.5	34.	9999.0	9999.0XX	
750.0	8172.	.0	-18.7	23.	355.2	8.5	
700.0	9975.	-3.4	-22.0	22.	10.9	8.6	
650.0	11884.	-7.1	-26.5	19.	328.2	4.4	
600.0	13922.	-9.5	-28.7	19.	239.4	2.5	
550.0	16110.	-13.8	-32.0	20.	284.3	12.4	
500.0	18465.	-18.4	-35.7	20.	269.8	16.7	
450.0	21013.	-24.6	-40.6	21.	273.7	24.1	
400.0	23798.	-31.5	-46.0	22.	275.0	28.5	
350.0	26838.	-39.1	-54.1	18.**	268.4	34.3	
300.0	30249.	-46.7			263.6	49.4	
250.0	34138.	-55.7			253.8	69.2	
200.0	38830.	-55.1			246.9	66.4	
175.0	41539.	-54.6			260.9	62.7	
150.0	44854.	-57.6			262.6	83.5	
125.0	48600.	-61.1			272.5	67.6	
100.0	53140.	-61.2			266.5	53.9	
80.0	57647.	-64.8			271.4	43.1	
70.0	60323.	-63.6			276.5	37.3	
60.0	63451.	-61.1			296.6	23.5	
50.0	67136.	-63.0			299.5	20.9	
40.0	71645.	-62.2			295.2	20.4	
30.0	77521.	-59.0			300.7	19.4	
25.0	81271.	-59.2			306.2	15.9	
20.0	86434.	55.9			301.4	28.3	
15.0	94296.	-33.5					

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

**DATE**  
**FILME**